WHAT IS CLAIMED IS:

1. A display device driving circuit for use with a display device having a display section including sub-pixels arranged in a matrix pattern and a plurality of signal lines for supplying image-forming signals to the sub-pixels, the display device driving circuit comprising:

voltage supply lines for transferring the image-forming signals to the plurality of signal lines;

switches for turning ON/OFF the transfer of the image-forming signals to the voltage supply lines; and

shorting means for electrically shorting one of the voltage supply lines that is connected to an odd-numbered one of the plurality of signal lines with another one of the voltage supply lines that is connected to an even-numbered one of the plurality of signal lines during a predetermined period including a period during which the switches are OFF, wherein the shorting means can be turned OFF autonomously when a polarity of a potential of the voltage supply line connected to the odd-numbered signal line and a polarity of a potential of the voltage supply line connected to the even-numbered signal line are switched around.

2. The display device driving circuit of claim 1, wherein the odd-numbered signal line and the even-numbered signal line are adjacent to each other.

3. The display device driving circuit of claim 1, wherein the voltage supply lines are all electrically shorted together during the predetermined period.

4. The display device driving circuit of claim 1, wherein:

the sub-pixels include groups of sub-pixels for different colors to be displayed; and

the voltage supply line connected to the odd-numbered signal line and the voltage supply line connected to the even-numbered signal line supply the image-forming

signals for driving the sub-pixels of the same color.

5. The display device driving circuit of claim 4, wherein:

the signal lines include three groups of signal lines for red, green and blue; and

the K^{th} signal line and the $(K+3)^{th}$ signal line are electrically shorted with each other by the shorting means, where K is any natural number.

6. The display device driving circuit of claim 4, wherein voltage supply lines that are for supplying the image-forming signals to the sub-pixels of the same color are all electrically shorted together during the predetermined period.

7. The display device driving circuit of claim 1, wherein the shorting means includes:

a shorting line for electrically connecting the voltage supply line connected to the odd-numbered signal line to the voltage supply line connected to the even-numbered signal line during the predetermined period;

a switching element provided along the shorting line and including a control section; and

a control element for performing a control so that either the potential of the voltage supply line connected to the odd-numbered signal line or the potential of the voltage supply line connected to the even-numbered signal line is applied to the control section at least during the predetermined period.

8. The display device driving circuit of claim 7, wherein:

the switching element is a first MISFET of a first conductivity type, with the control section being a gate electrode of the switching element; and

the control element includes a second MISFET of a second conductivity type provided between the voltage supply line connected to the odd-numbered signal line and the gate electrode of the switching element, and a third MISFET of the second conductivity type provided between the voltage supply line connected to the even-numbered signal line

and the gate electrode of the switching element.

9. The display device driving circuit of claim 7, wherein:

a polarity of each of the image-forming signals is inverted for every horizontal scanning period; and

a control is performed so that either the potential of the voltage supply line connected to the odd-numbered signal line or the potential of the voltage supply line connected to the even-numbered signal line is applied to the control section of the switching element throughout the horizontal scanning period.

10. The display device driving circuit of claim 8, wherein:

the control element further includes a fourth MISFET of the first conductivity type provided between a ground and a gate electrode of the first MISFET for turning OFF the switching element except during the predetermined period; and

a line connecting the fourth MISFET to the gate electrode of the first MISFET is connected to the second MISFET and the third MISFET.

11. The display device driving circuit of claim 1, wherein the shorting means includes:

a first shorting line and a second shorting line for electrically connecting the voltage supply line connected to the odd-numbered signal line to the voltage supply line connected to the even-numbered signal line during the predetermined period;

a first switching element provided along the first shorting line, wherein the first switching element is turned ON only when the potential of the voltage supply line connected to the odd-numbered signal line is equal to or greater than the potential of the voltage supply line connected to the even-numbered signal line, and is turned OFF autonomously when the potential of the voltage supply line connected to the odd-numbered signal line is less than the potential of the voltage supply line connected to the even-numbered signal line; and

a second switching element provided along the second shorting line, wherein the second switching element is turned ON only when the potential of the voltage supply line connected to the even-numbered signal line is equal to or greater than the potential of the voltage supply line connected to the odd-numbered signal line, and is turned OFF autonomously when the potential of the voltage supply line connected to the even-numbered signal line is less than the potential of the voltage supply line connected to the odd-numbered signal line.

12. The display device driving circuit of claim 11, wherein:

the first switching element includes an MISFET of a first conductivity type whose gate electrode is connected to the first shorting line, and a first transfer gate; and

the second switching element includes an MISFET of the first conductivity type whose gate electrode is connected to the second shorting line, and a second transfer gate.

13. The display device driving circuit of claim 11, wherein:

the first switching element includes a first diode and a third transfer gate; and

the second switching element includes a fourth transfer gate and a second diode, wherein the first diode and the second diode are arranged in opposite directions to each other with respect to a first output section and a second output section.

14. The display device driving circuit of claim 1, wherein:

connecting portions of the voltage supply lines for connecting the voltage supply lines to the plurality of signal lines are provided in a plurality of wiring layers; and

the connecting portions are provided so that those that are connected to adjacent ones of the plurality of signal lines, or those that are connected to ones of the plurality of signal lines of the same color, are adjacent to each other in the same wiring layer.

15. The display device driving circuit of claim 1, wherein:

connecting portions of the voltage supply lines for connecting the voltage supply lines to the plurality of signal lines are provided in a plurality of wiring layers; and

among the connecting portions, those that are connected to adjacent ones of the plurality of signal lines, or those that are connected to ones of the plurality of signal lines of the same color, are separately provided in a first one of the plurality of wiring layers and in a second one of the plurality of wiring layers, the second wiring layer being immediately above the first wiring layer, and are arranged so as to overlap with each other as viewed from above.

16. The display device driving circuit of claim 4, wherein:

the display device driving circuit further comprises a plurality of operational amplifiers arranged in a row for transferring the image-forming signals to the switches; and

one of the plurality of operational amplifiers that is for outputting the image-forming signal to be supplied to the K^{th} signal line is adjacent to another one of the plurality of operational amplifiers that is for outputting the image-forming signal to be supplied to the $(K+3)^{th}$ signal line.

17. The display device driving circuit of claim 1, wherein a polarity of the image-forming signals to be supplied to the odd-numbered signal line is opposite to that of the image-forming signals to be supplied to the even-numbered signal line.

18. A display device driving circuit for use with a display device having a display section including sub-pixels arranged in a matrix pattern and a plurality of signal lines for supplying image-forming signals to the sub-pixels, the display device driving circuit comprising:

voltage supply lines for transferring the image-forming signals to the plurality of signal lines;

switches for turning ON/OFF the transfer of the image-forming signals to the voltage supply lines;

a plurality of operational amplifiers arranged in a row for transferring the image-forming signals to the switches; and

shorting means for electrically shorting one of the voltage supply lines that is connected to an odd-numbered one of the plurality of signal lines with another one of the voltage supply lines that is connected to an even-numbered one of the plurality of signal lines during a predetermined period including a period during which the switches are OFF,

wherein one of the operational amplifiers that is for outputting the image-forming signal to be supplied to the K^{th} signal line is adjacent to another one of the operational amplifiers that is for outputting the image-forming signal to be supplied to the $(K+3)^{th}$ signal line, where K is a natural number.

19. The display device driving circuit of claim 18, wherein voltage supply lines that are for supplying the image-forming signals to the sub-pixels of the same color are all electrically shorted together during the predetermined period.

20. A display device, comprising:

a display section, the display section including sub-pixels arranged in a matrix pattern, a plurality of signal lines for supplying image-forming signals to the sub-pixels, and shorting means for electrically shorting a first, odd-numbered one of the plurality of signal lines with a second, even-numbered one of the plurality of signal lines during a predetermined period, wherein the shorting means can be turned OFF autonomously when a potential of a voltage supply line connected to the odd-numbered signal line and a potential of a voltage supply line connected to the even-numbered signal line are switched around; and

a display device driving circuit provided along a frame portion of the display section and including a first voltage supply line connected to the first signal line and a second voltage supply line connected to the second signal line.

21. The display device of claim 20, wherein:

the sub-pixels include groups of sub-pixels for different colors to be displayed; and

the first signal line and the second signal line are signal lines for supplying the image-forming signals to the sub-pixels of the same color.

22. The display device of claim 21, wherein signal lines that are for supplying the image-forming signals to the sub-pixels of the same color are all electrically shorted together.

23. The display device of claim 20, wherein the shorting means includes:

a shorting line for electrically connecting the odd-numbered signal line to the even-numbered signal line during the predetermined period;

a switching element provided along the shorting line and including a control section; and

a control element for performing a control so that either the potential of the voltage supply line connected to the odd-numbered signal line or the potential of the voltage supply line connected to the even-numbered signal line is applied to the control section at least during the predetermined period.

24. The display device of claim 20, wherein the shorting means includes:

a first shorting line and a second shorting line for electrically connecting the odd-numbered signal line to the even-numbered signal line during the predetermined period;

a first switching element provided along the first shorting line, wherein the first switching element is turned ON only when the potential of the voltage supply line connected to the odd-numbered signal line is equal to or greater than the potential of the voltage supply line connected to the even-numbered signal line, and is turned OFF autonomously when the potential of the voltage supply line connected to the odd-numbered signal line is less than the potential of the voltage supply line connected to the

even-numbered signal line; and

a second switching element provided along the second shorting line, wherein the second switching element is turned ON only when the potential of the voltage supply line connected to the even-numbered signal line is equal to or greater than the potential of the voltage supply line connected to the odd-numbered signal line, and is turned OFF autonomously when the potential of the voltage supply line connected to the even-numbered signal line is less than the potential of the voltage supply line connected to the odd-numbered signal line.